of the "faculty," monographs and textbooks for the profession at large.

RESULTS

The accomplishments of the committee to date are indeed gratifying. The credit must go very largely to the original three members of the committee. An outstanding advantage has been the development of a classification, thus creating a common language. A very great hindrance heretofore has been the duplication of names for a single condition. This duplication has led to serious misunderstandings even between the leaders of the profession in the fields of surgery and pathology. For instance, one individual might mean a malignant disease by the use of a certain term such as myeloma, while another using the same nomenclature might mean a benign tumor. Or a term might imply a malignant condition, such as giant cell sarcoma, when a benign state was understood. Furthermore, it has not been an uncommon experience where a surgeon has sent material to more than one pathologist for him to receive a variety of diagnoses usually all meaning the same disease but hopelessly confusing the surgeon. Of course the classification which has been developed is probably quite imperfect and in the future will doubtless have to be changed, but for the present it serves as a good working basis.

A secondary product of the work of the committee, but of equal importance, are the contributions by the members of the committee or others based on the studies of the collected material. Three of these which stand out from among the others in importance are: (1) Doctor Codman's book [1] summarizing the criteria for the establishment of the diagnosis of osteogenic sarcoma and including a table of the five-year cures of osteogenic sarcoma; (2) a monograph by Doctor Kolodny [2] on "Bone Sarcoma," which critically analyzes the material of the registry and places in concrete form all present knowledge and opinions regarding this subject; (3) a monograph by Doctor Connor [3] entitled "Endothelial Myeloma, Ewing," which discusses the first sixty cases in the registry, and adds much valuable information to this disputed subject. Each one of these contributions is a classic, and collectively they have furnished to the profession at large more helpful information than is to be found in the complete collection of prior discussions on these subjects. Codman's book especially is recommended as a pocket volume which every student and member of the profession should not only possess but should commit to memory. Kolodny's article treats of bone sarcoma and giant cell tumor primarily, attempting by careful weighing of evidence to show the basis for our conclusions regarding these conditions.

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MYASTHENIA GRAVIS

REMARKS ON THE AGE INCIDENCE—REPORT OF A CASE

By MARK GERSTLE, JR., M. D.
San Francisco

ACCORDING to Garrison,[1] the first description of myasthenia gravis was by Willis in 1865. This was followed by that of Wilks [2] in 1877. Jolly,[3] in 1891, was the first to establish the malady as a clinical entity, and at that time described the characteristic reaction of the muscles to electrical stimuli which is often called by his name.

The symptomatology and clinical findings are well known at present, and will not be discussed here.

AGE INCIDENCE

Redvers Ironside,[4] in his description of the disease in the *Oxford System of Medicine,* states that no case has been observed to commence before puberty. In 1908 Booth [5] collected the case reports of 250 patients, the youngest of whom was an infant of twenty-three months, and the oldest a patient of seventy years.

The writer has collected sixty-seven records of patients who suffered from this disease in the National Hospital, Queen Square, London, between the years 1900 and 1927. The youngest was a child of six years, and the oldest a man of sixty. The following comparative data are therefore presented:

Comparison of Two Series

	BOOTH'S CASES (250)		NATIONAL HOSPITAL CASES (67)	
Age Periods	Number	Per Cent	Number	Per Cent
1–10 yrs.	5	2	2	3
10–20 yrs.	34	13.6	12	18
20–30 yrs.	85	38.0	31	46.2
30–40 yrs.	58	23.2	8	12.2
40–50 yrs.	40	16.0	13	19.0
50–60 yrs.	12	4.8	1	1.5
60–70 yrs.	6	2.8	0	0
70–80 yrs.	1	0.8	0	0

It can be seen that there exists a fair degree of similarity between the two series. In Booth's series, however, is found a much younger patient than any seen at the National Hospital, and he also has seven patients after the age of sixty, which age period does not occur in the National Hospital series. In both sets of figures the commonest age of onset is shown to be the third decade, and it is also clear that cases occurring before puberty are rare. That they do occur, however, is obvious.

It, therefore, seems worth while to report in some detail a case occurring in a boy of ten and one-half years of age, seen recently in the Out-Patient Clinic of Dr. W. J. Adie, at the National Hospital, London.

REPORT OF CASES

Donald B., aet. ten and one-half years. Admitted to the National Hospital May 20, 1927, on the service of Dr. W. J. Adie.

Complaint.—Double vision; generalized weakness of movements.

Duration.—Ten days.

Present Illness.—He was in every way healthy until May 10, 1927. On the evening of that day he complained of a frontal headache, and passed a rather

restless night. On May 11 he went to school in the morning feeling as usual, but returned home in the afternoon saying that he had seen everything double all day long. This, however, was the only complaint. On May 12 he came to the out-patient department to see Doctor Adie, and his mother had great difficulty in getting him home again, as his legs became so weak that at times they refused to bear his weight. During the intervening few days he had grown gradually weaker, and his eyelids had drooped conspicuously. There had been no actual limitation of the range of movements due to weakness, but he had frequently had to raise his eyelids with his fingers before he could look straight ahead. For the past four days he had been confined to bed, but, as far as his mother knew, had no fever, headache, or vomiting.

Previous Illnesses.—Pertussis, measles. No diphtheria.

Family History.—Irrelevant.

Present State.—A well-developed boy, rather pale. Lies comfortably in bed in any position without undue restlessness. Sleeps and eats well. Normal daily bowel movement.

Mental State.—A tendency to be irritated by questions, otherwise cheerful. His intelligence is good, and he gives a clear account of his illness. Coöperation is excellent.

Speech.—Slightly blurred, and with an explosive tendency which becomes more pronounced after he has been speaking for a time.

Cranial Nerves—1. Normal. No anosmia.

2. Vision 6/6 right and left. Retinae normal. Right disk normal. Left disk shows some blurring of the inner margin. No venous engorgement.

3, 4 and 6. No diplopia complained of now. The pupils are central, circular, and equal. They react sluggishly to light, but well to accommodation. The external ocular movements are poor in all directions: upward, downward, inward, and outward. The most marked limitation is on looking upward. Convergence is occasionally poor, and sometimes normal. No nystagmus. There is bilateral ptosis with voluntary elevation of the eyebrows, more marked on the left.

5. Motor: The masseters and temporals contract so poorly that the patient's bite was incapable of causing pain to the examiner's finger which had been placed between the teeth. The jaw opened in the midline. Sensory: normal to all stimuli.

7. The left angle of the mouth is held lower than the right. The facial movements, on the whole, are very weak. The eyes can be easily opened against resistance. Whistling is impossible. The cheeks can only be partially distended with air. The eyebrows are very poorly elevated at their median ends.

8. Hearing is normal. A. C. greater than B. C. Weber not lateralized. No tinnitus, vertigo, or aural discharge.

9, 10, and 11. All movements equally weak right and left.

12. The tongue protrudes in the midline without tremor, spasticity, or fibrillation. Can be inserted with force into either cheek. No atrophy.

Motor System.—Trunk: Both flexion and extension of the head are weak. Lateral rotation is stronger, but not normal. The abdominal muscles contract well on ventral flexion of the trunk. There is no deviation of the umbilicus. The erector spinae muscles are very weak, and sitting up is almost impossible. No bulging of the flank on coughing.

Arms: All shoulder movements are very weakly performed against resistance. There is no weakness observed of isolated muscles. All are full in range when actually performed, but are characterized by excessive feebleness. There is no atrophy and no fibrillations were observed. None of the muscles contract well on voluntary effort. There is no ataxia or irregularity of movement apart from that due to weakness.

Legs: The hip movements are especially weak on abduction and adduction. Flexion of the hip is fair. In the knee, extension is better than flexion. In the ankle, plantar flexion is better than dorsiflexion. Both are bilaterally weak, however. No atrophy or fibrillations noted.

Sensory System.—Absolutely normal throughout to all forms of cutaneous, bone, deep muscles, and joint stimuli. No astereognosis.

Reflexes.—Both corneals were normal. The biceps, triceps, and supinator jerks of both arms were not obtained. The upper and lower abdominals were normal. Both knee jerks were sluggish, but obtainable. The ankle jerks were normal, and the plantar responses were flexor.

Gait and Stance.—Normal.

Sphincters.—Normal without impairment of control. There are no trophic changes.

The cardiac, respiratory, gastro-intestinal, and genito-urinary systems are normal throughout.

The temperature, while in the hospital, varied from 97 to 99 degrees. The urine remained clear throughout his stay.

An x-ray of the thymus was reported normal.

An electrical reaction of the affected muscles showed response to both currents.

PROGRESS NOTES

The patient improved after a week in the hospital under rest and symptomatic treatment. He was soon able to sit up alone for a short time. He gradually gained in muscular power and strength, but was very easily fatigued by the slightest exertion even on discharge from the hospital. Doctor Adie recalls that, while in the hospital, the patient had several acute respiratory attacks, characterized by labored, rapid breathing. He was discharged on August 25, 1927, having been in the hospital a little over three months. His condition at that time was described as "improved."

COMMENT

The writer saw the patient on May 4, 1928, in Doctor Adie's Out-Patient Clinic at the National Hospital. This was about nine months after his discharge from the hospital. He now complained of listlessness, and an abnormal tendency to fatigue at the end of a day of average activity. The boy appeared in excellent health. His reflexes had all returned to normal and were active and equal. There were no ocular palsies, and no trace of muscular atrophy. The strength of his bite was normal. The only abnormal finding in the general and neurological examination was the presence of the myasthenic type of smile, in which the corners of the mouth turned down instead of up, producing a form of snarl.

SUMMARY

1. Myasthenia gravis can, and does, occur at any age.

2. Cases occurring before puberty are very rare.

3. A case in a child of ten and one-half years is here reported.

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